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additional 30 inches (760 mm) will be less than the present value of the benefits of making the change. Further, the costs of any design changes can be amortized over the number the bunk beds manufactured after the design change is made. Thus, the costs of any design change will be nominal.

- 3. Lower bunk end structures. The Commission is aware of a death, involving entrapment in the end structures of the lower bunk, occurring in a scenario not currently addressed by the voluntary standard. This death would be addressed by extending the voluntary standard's lower bunk end structures entrapment provisions from 9 inches above the lower bunk's sleeping surface to the bottom of the upper bunk and by also including a test for neck entrapment in this area. The Commission expects the costs of this requirement to be design-related only, and small. Indeed, for some bunk beds, materials costs may decrease since less material may be required to comply with these requirements than is currently being used. Again, the design costs for these modifications to the end structures can be amortized over the subsequent production run of the bed.
- 4. Effect on market. The small additional costs from any wall-side guardrails and endstructure modifications are not expected to affect the market for bunk beds, either alone or added to the costs of compliance to ASTM's provisions.
- 5. Conclusion. The Commission has no reason to conclude that any of the standard's requirements will have costs that exceed the requirement's expected benefits. Further, the total effect of the rule is that the benefits of the rule will exceed its costs by about 4-23 times. Accordingly, the Commission concludes that the benefits expected from the rule bear a reasonable relationship to its costs.
- E. The rule imposes the least burdensome requirement that prevents or adequately reduces the risk of injury for which the rule is being promulgated. 1. The Commission considered relying on the voluntary standard, either alone or combined with a third-party certification program. However, the Commission concluded that a mandatory program will be more effective in reducing these deaths, each of which is caused by an unreasonable risk of entrapment. Accordingly, these alternatives would not prevent or adequately reduce the risk of injury for which the rule is being promulgated.
- 2. The Commission also considered a suggestion that bunk beds that conformed to the voluntary standard be so labeled. Consumers could then compare conforming and nonconforming beds at the point of purchase and make their purchase decisions with this safety information in mind. This, however, would not necessarily reduce injuries, because consumers likely would not know

there is a voluntary standard and thus would not see any risk in purchasing a bed that was not labeled as conforming to the standard.

3. For the reasons stated in this Appendix, no alternatives to a mandatory rule have been suggested that would adequately reduce the deaths caused by entrapment of children in bunk beds. Accordingly, the Commission finds that this rule imposes the least burdensome requirement that prevents or adequately reduces the risk of injury for which the rule is being promulgated.

PART 1301—BAN OF UNSTABLE REFUSE BINS

Sec.

1301.1 Scope and application.

1301.2 Purpose.

1301.3 Findings.

1301.4 Definitions.

1301.5 Banning criteria. 1301.6 Test conditions.

1301.7 Test procedures.

1301.8 Effective date.

AUTHORITY: Secs. 8, 9, 86 Stat. 1215–1217, as amended, 90 Stat. 506; 15 U.S.C. 2057, 2058.

SOURCE: 42 FR 30300, June 13, 1977, unless otherwise noted.

§ 1301.1 Scope and application.

- (a) In this part 1301 the Consumer Product Safety Commission (Commission) declares that certain unstable refuse bins are banned hazardous products under sections 8 and 9 of the Consumer Product Safety Act (CPSA) (15 U.S.C. 2057 and 2058).
- (b) This ban applies to those refuse bins of metal construction that are being distributed in commerce on or after the effective date of this rule, which do not meet the criteria of §1301.5 and which are produced or distributed for sale to, or for the personal use, consumption or enjoyment of consumers, in or around a permanent or temporary household or residence, a school, in recreation or otherwise. The Commission has found that (1) these refuse bins are being, or will be distributed in commerce; (2) they present an unreasonable risk of injury; and (3) no feasible consumer product safety standard under the CPSA would adequately protect the public from the unreasonable risk of injury associated with these products. The ban is applicable to those refuse bins having an internal volume one cubic yard or greater by actual measurement, which will

§ 1301.2

tip over when subjected to either of the forces described in §1301.7 and which are in commerce or being distributed in commerce on or after the effective date of the ban.

(c) When such refuse bins are the subject of rental or lease transactions between owners of refuse bins or between refuse collection agencies and persons who make such refuse bins available for use by the public, such transactions are considered to be distributions in commerce and therefore come within the scope of this ban. Refuse collection agencies or owners of refuse bins who rent or lease refuse bins to persons who make them available for use by consumers are considered to be distributors; the persons to whom refuse bins are rented or leased are not considered to be distributors.

(d) On or after the effective date of this rule it shall be unlawful to manufacture for sale, offer for sale, or distribute in commerce, the unstable refuse bins described in this rule.

(e) This rule, effective November 13, 1981, is partially revoked and therefore does not apply to front-loading, straight-sided refuse bins without trunnion bars having an internal volume capacity of 1, 1½, or 2 cubic yards, of the following external dimensions:

	Length (inches)	Width (inches)	Height 1		
Internal volume			High side (inches)	Low side (inches)	Weight (lbs)
1 cubic yard	70–72	21–23	29–31	29–31	313–347
cubic yards 2 cubic	70–72	29–31	33–36	29–32	346–382
yards	70–72	32–35	39–43	31–36	409–453

¹ Does not include height of wheels.

(Sec. 9(h), Pub. L. 97-35, Pub. L. 92-573, 86 Stat. 1215, 15 U.S.C. 2058(h))

[42 FR 30300, June 13, 1977, as amended at 46 FR 55925, Nov. 13, 1981]

$\S 1301.2$ Purpose.

The purpose of this rule is to ban those refuse bins which come under the scope of this ban because they present an unreasonable risk of injury due to tip-over that can result in serious injury or death from crushing.

§1301.3 Findings.

(a) Risk of injury. The Commission has studied 19 in-depth investigation reports of accidents associated with tip-over of unstable refuse bins. The 19 accidents, which involved 21 victims, resulted in 13 deaths. Of the 21 victims, 20 were children 10 years of age and Additionally, under. Commission records show three death certificates for victims, under 5 years of age, who were killed by refuse bins tipping over. Therefore, the Commission finds that unreasonable risks of injury or death from crushing due to tip-over are associated with certain unstable refuse bins having an internal volume one cubic yard or greater, which unreasonable risk this banning rule is designed to eliminate or reduce.

(b) Products subject to this ban. (1) The Commission finds that the types of products subject to this ban are those manufactured metal receptacles known in the solid waste collection trade as containers, refuse bins, buckets, boxes or hoppers, with actual internal volumes of one cubic yard or greater, used for the storage and transportation of solid waste. They are fabricated in numerous sizes and configurations for use with rear, side, front, hoist and roll-off loaded trash collection trucks and are used by private firms and public agencies

(2) Although unstable refuse bins subject to this ban may be in various forms and shapes, the Commission's indepth investigations into accidents associated with metal refuse containers indicate that most accidents have occurred with slant-sided metal refuse bins which are used by rear and sideloaded trucks. Therefore, the Commission bases its economic analysis of the potential impact of the ban upon the population of these bins. Certain refuse bins such as front loaded, roll-off, box and other types of large or broad based bins, because of their configuration, bulk and weight are likely to be inherently stable and are therefore not included in the population of potentially unstable bins studied in this economic

(3) The Commission estimates that there may be approximately 638,000-716,000 slant-sided, metal refuse bins with an internal volume one cubic yard

or greater, which may be unstable. The population of potentially unstable bins owned by some 10,000–15,000 private solid waste collection firms in all parts of the United States and its territories is estimated to be 359,000–371,000. These figures are discussed in the Commission's *Economic Impact Statement* of April 22, 1977, which is available for review from the Commission's Office of the Secretary, Washington, D.C. 20207.

(c) Need of the public for the product and effects on utility, cost, and availability. (1) The public need for refuse bins is substantial since these products are used for the containment of solid waste and thus contribute to public hygiene. The U.S. Environmental Protection Agency estimates that 135,000,000 tons of solid waste were collected in 1976 from residential, commercial and industrial sources. Approximately 101,250,000 tons (75%) were collected by private firms and the remainder by public agencies.

(2) The Commission finds that the ban will not affect the utility that consumers derive from the general use of refuse bins. The interest of the public is in continuity, availability and price of solid waste collection. The ban could result in a shift from bins which are subject to the ban to other types of storage containers. Such a shift would not affect solid waste collection and would entail a small price increase for individual consumers. To the extent that injuries and deaths associated with the use of unstable bins are reduced or eliminated as a result of the ban, the public utility derived from the use of the product will be increased.

(3)(i) The Commission finds that, based on its analysis of industrial estimates, newly produced complying refuse bins will cost approximately 1-10% more than currently produced noncomplying bins and that existing inventories of unstable bins can be modified (depending upon size) for about \$45-\$75 each. This modification cost estimate includes the cost of material, shop labor, retrieval and return to service, and the substitution of one bin for another for on-site service.

(ii) The Commission estimates that the ban will not result in any significant price increases for the delivery of solid waste collection service to the general public because of the competitive structure of the solid waste collection industry.

(4) The Commission finds that the ban will have no effect on the availability of solid waste collection service to the general public. Solid waste collection haulers who use products subject to this ban can modify these refuse bins so that these products can continue to be used for solid waste collection.

(d) Alternatives. (1) The Commission has considered other means of achieving the objective of this ban, but has found none that it believes would have fewer adverse effects on competition or that would cause less disruption or dislocation of manufacturing, servicing or other commercial practices consistent with public health and safety. The Commission estimates that this ban may, because of capital and testing costs and maintenance capacity limitations, have an adverse effect on individual firms within some markets.

(2) The Commission estimates that the ban will not have an adverse effect on the competitive structure of the solid waste collection industry. The competitive nature of solid waste collection firms is fostered because of low starting costs, particularly if a firm is owner-operated. The rate of entry and exit into and out of the industry for small operators tends to be high relative to larger firms in the industry. The ban will most likely not increase the degree of market concentration among the larger firms nor affect the rate of entry into or exit out of the industry by relatively smaller firms.

(3) Table 3 of the Economic Impact Statement indicates that about 85 percent of the private sector trash haulers are those with a fleet size of about 10 trucks and have annual revenues under \$1 million. These might be classified as small business firms. All firms in the trash hauling business would have two possible problems associated with the ban: cost and time to retrofit, and access to capital for retrofitting. The problem of raising capital to retrofit should not be a burden to small firms unless they are denied credit for factors not associated with this ban. The revised effective date from 9 to 12 months will extend both the time to

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retrofit and the time to search for capital sources, if necessary. We conclude that the small firms in the trash hauling industry will not experience undue hardship relative to their larger competitors.

(e) *Conclusion.* (1) The Commission finds that this rule is reasonably necessary to eliminate or reduce the unreasonable risks of injury associated with refuse bins, as they are defined in \$1301.4, and which fail to meet the criteria specified in \$1301.5

(2) Based on all of the above findings, the Commission finds that the issuance of this rule is in the public interest.

(3) The Commission is aware of the fact that refuse bins are used for many years before being discarded. Estimates of their useful life range from 10 to 15 years. Although other products which may be hazardous may also have a long life in the hands of individual consumers, a substantial number of unstable refuse bins remain in commerce because they are rented or leased and are constantly available for use by large numbers of consumers. The combination of the long life of refuse bins plus the fact that unstable refuse bins could remain in commerce and be available for use by many people, persuaded the Commission to make this finding that no feasible consumer product safety standard under the CPSA could adequately protect the public from the unreasonable risk of injury associated with those unstable refuse bins coming under the coverage of this ban.

§ 1301.4 Definitions.

(a) The definitions in section 3 of the Consumer Product Safety Act (15 U.S.C. 2052) apply to this part 1301.

(b) Refuse bin means a metal receptacle having an internal volume one cubic yard or greater, by actual measurement, which temporarily receives and holds refuse for ultimate disposal either by unloading into the body or loading hopper of a refuse collection vehicle or by other means.

(c) *Internal volume* means the actual volumetric capacity of the container. This may not necessarily correspond to the nominal size rating used by industry.

(d) *Tip over* means that during the application of either test force described

in §1301.7(a), the refuse bin begins to rotate forward about its forwardmost ground supports.

§1301.5 Banning criteria.

(a) Any refuse bin of metal construction produced or distributed, for sale to, or for the personal use, consumption or enjoyment of consumers, in or around a permanent or temporary household or residence, a school, in recreation or otherwise, which is in commerce or being distributed in commerce on or after the effective date of this ban and which has an actual internal volume one cubic yard or greater and tips over when tested under the conditions of §1301.6 and using the procedures described in §1301.7, is a banned hazardous product.

(b) The Commission considers a refuse bin to tip over when it begins to rotate forward about its forwardmost ground supports.

§ 1301.6 Test conditions.

(a) The refuse bin shall be empty and have its lids or covers in a position which would most adversely affect the stability of the bin when tested.

(b) The refuse bin shall be tested on a hard, flat surface. During testing, the bin shall not be tilted from level in such a way as to increase its stability.

(c) Those refuse bins equipped with casters or wheels shall have the casters or wheels positioned in a position which would most adversely affect the stability of the bin and shall be chocked to prevent movement.

(d) The stability of the refuse bin shall be tested without dependence upon non-permanent attachments or restraints such as chains or guys.

(e) For purposes of enforcement, bins will be tested by the Commission in that position which most adversely affects their stability.

§ 1301.7 Test procedures.

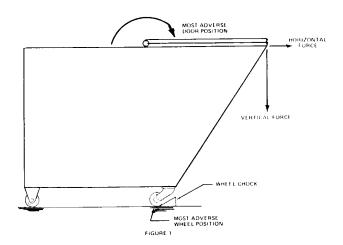
(a) The refuse bin shall be tested by applying forces as described in paragraphs (a) (1) and (2) of this section one after the other.

(1) A horizontal force of 70 pounds $(311\ N)$ shall be applied at a point and in a direction most likely to cause tipping, and

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(2) A vertically downward force of 191 pounds $(850\ N)$ shall be applied to a

point most likely to cause tipping. (See Figure 1.)



(b) These forces shall be applied separately and the bin shall not tip over under the application of either action cited above in paragraph (a)(1) or (a)(2).

§ 1301.8 Effective date.

The effective date of this ban shall be June 13, 1978.

PART 1302—BAN OF EXTREMELY FLAMMABLE CONTACT ADHESIVES

Sec.

1302.1 Scope and application.

1302.2 Purpose.

1302.3 Definitions.

1302.4 Banned hazardous products.

1302.5 Findings.

1302.6 Effective date.

AUTHORITY: Secs. 8, 9; 86 Stat. 1215-1217 as amended; 90 Stat. 506; (15 U.S.C. 2057, 2058).

Source: 42 FR 63731, Dec. 19, 1977, unless otherwise noted.

§ 1302.1 Scope and application.

(a) In this part 1302 the Consumer Product Safety Commission (Commission) declares extremely flammable contact adhesives and similar liquid or semiliquid consumer products to be banned hazardous products under sections 8 and 9 of the Consumer Product Safety Act (CPSA) (15 U.S.C. 2057 and

2058). This ban applies to those extremely flammable contact adhesives and similar liquid or semiliquid consumer products, as defined in §1302.3(b), which are in commerce or are being distributed in commerce on or after the effective date of this regulation, and which are consumer products (as defined in section 3(a) of the Act (15 U.S.C. 2052) customarily produced or distributed for sale to, or for the personal use, consumption or enjoyment of consumers in or around a permanent or temporary household or residence, a school, in recreation or otherwise.

(b) An extremely flammable contact adhesive as defined in §1302.3(b) is a banned hazardous product if the manufacturer, distributor, or retailer customarily produces or distributes the product for sale to, or use by consumers, or if the manufacturer, distributor, or retailer fosters or facilitates the product's sale to, or use by, consumers. For example, contact adhesives available in retail stores, such as lumber yards or hardware stores, for sale to consumers would be included in the scope of the ban even though such outlets may sell such products primarily to industrial or professional users. The manufacturer who markets